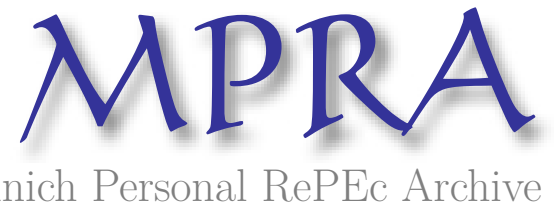

Covid-19 pandemic and economic crisis: The Nigerian experience and structural causes

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COVID-19 pandemic and economic crisis: the Nigerian experience and structural causes

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Abstract

This paper analyses the COVID-19 situation in Nigeria, its effect on the economy and the structural causes that worsen the coronavirus (COVID-19) crisis. The findings reveal that the economic downturn in Nigeria was triggered by a combination of declining oil price and spillovers from the COVID-19 outbreak, which not only led to a fall in the demand for oil products but also stopped economic activities from taking place when social distancing policies were enforced. The government responded to the crisis by providing financial assistance to businesses and a small number of households that were affected by the coronavirus (COVID-19) outbreak. The monetary authority adopted accommodative monetary policies and offered a targeted ₦3.5trillion loan support to some sectors. These efforts should have prevented the economic crisis from occurring but it didn't. Economic agents could not freely engage in economic activities for fear of contracting the COVID-19 disease that was spreading very fast at the time.

JEL classification: G21, G28, I11, I18

Keywords: Nigeria, COVID-19, Coronavirus, SARS-CoV-2, outbreak, pandemic, financial crisis, global recession, public health, spillovers, monetary policy, fiscal policy, liquidity provision, Central banks, economy.

This version: 2020

1. Introduction

This study analyses the COVID-19 situation in Nigeria, the economic crisis and the structural causes. The COVID-19 pandemic has had far-reaching effects on the global economy (Ozili and Arun, 2020). It affected the global travel business, national health care systems, the food industry, events industry, education and global trade. Due to globalization, there are expectations of spillover effects to emerging and developing countries due to their dependence on developed countries for the importation of goods and services (Ozili and Arun, 2020). A recent literature has emerged that examine the effect of COVID-19 on economic activities (Fernandes, 2020; Atkeson, 2020; McKibbin and Fernando, 2020; Altig et al, 2020; Ozili and Arun, 2020). Yet, the recent literature has not examined the effect on COVID-19 on economic aggregates in developing countries such as Nigeria. The impact of COVID-19 on the Nigerian economy has not been explored in the recent literature. This study fills this gap in the literature.

Economic crises or recessions are often caused by market corrections (Hart and Tindall, 2009; Jones, 2016), market failure (Stiglitz, 2008; Chauffour and Farole, 2009; Petrakos, 2014), external trade and price shocks (Ros, 1987; Mendis, 2002; Gomulka and Lane, 1997; Francois and Woerz, 2009), political instability (Aisen and Veiga, 2013; Gasiorowski, 1995; Lagravinese, 2015), and civil unrest through protests (Bermeo and Bartels, 2014; Giugni and Grasso, 2016; Grasso and Giugni, 2016; Bernburg, 2016), amongst others.

Economic crises are not new in Nigeria. During the 2016 economic crisis, the monetary authority in Nigeria defended the local currency from forced devaluation against the dollar and adopted a managed-float foreign exchange system, which worked well from 2016 to 2019. After the 2016 economic crisis or recession, it was widely believed that the unexpected and sustained decline in oil price was the most important cause of economic crises in Nigeria. But in 2020, nobody thought that a public health crisis could trigger an economic crisis in the country. What made the 2020 economic crisis different from other economic crises or recessions in Nigeria was that most economic agents, who could have helped to revive the economy were unable to engage in economic activities due to fear of contracting the COVID-19 disease. Also, economic agents did not engage in economic activities when the government imposed and enforced its social distancing rules and movement lockdown in Abuja, Lagos and Ogun states on the 30th March of 2020.

Although the coronavirus outbreak which started in the Wuhan province of China had spillover problems in Nigeria, the reason why the outbreak was severe in Nigeria and caused suffering to poor citizens was because of weak institutions that were ineffective in responding to the pandemic and the lack of adequate social welfare programs that would have catered for majority of the poor citizens and vulnerable citizens who were affected by the crisis. The fear of financial and economic collapse led to panic buying, hoarding of foreign currency by individuals and businesses mostly for speculative reasons, flight to safety in investment and consumption, households stocking up on essential food and commodity items, businesses asking workers to work from home to reduce operating costs.

The analysis in this paper contributes to the literature that examine the cause of economic crises in developing and transition countries. This literature shows that the level of development in a country plays an important role in prolonging economic crises or in facilitating economic recovery. This study also contributes to the recent literature that investigate the impact of coronavirus in society (see., Chinazzi et al, 2020; Haleem et al, 2020; Chen et al, 2020; Fornaro and Wolf, 2020). This study contributes to this literature by exploring the factors that worsen the COVID-19 pandemic and the economic crisis in Nigeria.

The rest of the paper is divided into six parts. Section 2 discuss the literature on economic crisis. Section 3 presents an overview of the COVID-19 pandemic from a global context. Section 4 discuss the COVID-19 outbreak in Nigeria. Section 5 discuss the structural factors that worsen the economic crisis in Nigeria. Section 6 presents the research design including the sample and methodology. Section 7 discuss the results. Section 8 concludes.

2. The literature on economic crisis

2.1. General literature

The literature on economic crisis is vast. Morales and Sachs (1989), in their analysis of the economic crisis in Bolivia, show that Bolivia suffered from major external shocks, including the rise in world interest rates in the early 1980s, the cutoff in lending from the international capital markets, and the decline in world prices of Bolivia's commodity exports. Bolivia also witnessed hyper-inflation from 1984 to 1985, and many well-connected rent-seeking individuals made large

profit in the hyper-inflation. Anybody with access to official foreign exchange from the central bank purchased cheap dollars and sold them at high rates and made excess profit in the black market. Similarly, commercial banks who took deposits at zero interest were lending money at high nominal interest rates. The government extended large amounts of low-interest loans to politically powerful land-owners which became grants to them as a result of the hyper-inflation (Morales and Sachs, 1989).

Honkapohja and Koskela (1999) show that, in the 1990s, Finland experienced a deep depression as its GDP dropped to about 14% and the unemployment level rose from 3% to almost 20%. This was caused by both bad luck and bad policies. Bad luck took the form of external shocks such as the collapse of trade with the former Soviet Union in 1991 while bad policies took the form of a poorly designed financial regulation and mistaken policy reactions at the onset of the crisis. There was also high private sector's indebtedness which increased structural unemployment, and this explained why there were few job creation during the economic recovery (Honkapohja and Koskela, 1999).

Di Quirico (2010) show that the 2007-8 global financial crisis affected Italy's economy due to lack of structural reforms prior to the crisis. Italy had barely recovered from twenty years of political instability and economic decline. The 2007-8 global financial crisis further worsened the economic situation in Italy. The widespread corruption (i.e., granting business contracts on the basis of political connections rather than by merit), the absence of investment in new projects for economic growth, and the inability of the ruling government to initiate real reforms contributed to the economic crisis in Italy (Di Quirico, 2010).

Thailand was also affected by the Asian economic crisis. Glassman (2001) showed that the economic crisis in Thailand was rooted in declining profitability of the manufacturing sector during a time of increased global export competition and over-capacity in Asia. This triggered the economic downturn throughout the Asian region, with Thailand falling first because of its significant liabilities, and other countries being pulled into forced devaluation through financial contagion effects (Glassman, 2001).

Nigeria witnessed two economic crises within a decade. The 2009 economic crisis recession was caused by a combination of the after-effect of the 2007-8 global financial crisis, poor loan underwriting process, bad risk management practices and poor corporate governance of Nigerian

banks (Sanusi, 2010). Banks were a major cause of the 2009 economic crisis. On the other hand, the 2016 economic crisis was caused by unexpected decline in oil price which led to a sharp drop in oil revenue which severely affected Nigeria's foreign reserve (Adeniran and Sidiq, 2018). This led to massive balance of payment deficits combined with an already high debt burden which plunged Nigeria into its second recession in a decade.

The literature also show that economic crises have notable consequences. For instance, Carneiro et al (2014) show that the economic crisis in Portugal gave rise to job destruction due to the collapse of existing firms, increasing unemployment rate, increase in the incidence of minimum wage freeze, and also led to an increasing number of temporary workers. Cheong (2001) show that there was increasing income inequality during the Korean economic crisis, while Giannakis and Bruggeman (2017) in their analysis of the economic crisis in Greece observed that rural regions are more resistant to recessionary shocks than urban regions. Other consequences include: high mortality rates from homicide, pneumonia, alcohol dependence during economic crisis (Khang et al, 2005), and the collapse of many small and medium scale enterprises (Soininen et al, 2012). Ozili (2020) show that the COVID-19 pandemic and the lockdown restrictions had negative socioeconomic consequences for African countries. So far, the literature has not analysed the effect or consequence of a health crisis on the economy. More specifically, the effect of coronavirus, or COVID-19, on economic activities and performance in Nigeria has not been explored in the literature.

2.2. Nigerian literature

Some Nigerian studies on COVID-19 have emerged in the recent literature. Olapegba et al (2020) assess the knowledge and perceptions of Nigerians about COVID-19. They find that some Nigerians have misconceptions about COVID-19, for instance, some respondents believe that COVID-19 is a biological weapon of the Chinese government. These misconceptions prevented them from taking maximum preventive measures. They suggest that evidence-based campaign should be intensified to remove misconceptions and promote precautionary measures. Ozili (2020) show that Nigeria had the highest number of COVID-19 cases in West Africa and the third highest cases in Africa between March and April. Ohia et al (2020) predict that the effect on COVID-19 will be severe in Africa because African countries have fragile health systems. They argue that Nigeria's current national health systems cannot respond to the growing number of infected

patients who require admission into intensive care units. They suggest that Nigeria should explore available collective measures and interventions to address the COVID-19 pandemic. Jacob et al (2020) show that the COVID-19 pandemic affected higher institutions in Nigeria through the lockdown of schools, reduction of international education, disruption of academic calendar of higher institutions, cancellation of local and international conferences, creating teaching and learning gap, loss of man power in the educational institutions, and cut in budget of higher education. Adegboye et al (2020) examine the early transmission of COVID-19 in Nigeria, and show that the COVID-19 cases in Nigeria were lower than expected. Adenomon and Maijamaa (2020) examine the impact of COVID-19 on the Nigerian stock exchange from the 2nd January 2020 to 16th April 2020. The results revealed a loss in stock returns and high volatility in stock returns during the COVID-19 period in Nigeria.

3. Understanding the COVID-19 pandemic

3.1. Global context

The coronavirus began in Wuhan, Hubei Province, China. Residents who lived in Wuhan had some link to a large seafood and live animal market, which suggest that the mode of transmission of coronavirus was from animal to person. The virus has been named "SARS-CoV-2" and the disease it causes has been named "coronavirus disease 2019" (abbreviated "Covid-19"). The first known patient of Coronavirus started experiencing symptoms in Wuhan, China on 1 December 2019. Since then, there have been over 800,000 reported cases around the world.

Some global statistics are reported in table 1a. The table shows that the U.S. had the largest reported cases, followed by Spain and Russia on the reporting date. In Africa, South Africa had the largest reported cases, followed by Egypt and Nigeria on the reporting date.

(insert table 1a here)

Data obtained from the World health organization (WHO) on the same reporting data shows that Nigeria had over 5,000 cases, 167 deaths and the mode of transmission was through community transmission.

(insert table 1b here)

3.2. Impact on the global economy

The COVID-19 pandemic affected the global economy in two ways. One, the spread of the virus encouraged social distancing which led to the shutdown of financial markets, corporate offices, businesses and events. Two, the rate at which the virus was spreading, and the heightened uncertainty about how bad the situation could get, led to flight to safety in consumption and investment among consumers and investors (Ozili and Arun, 2020).[1] There was a general consensus among top economists that the coronavirus pandemic would plunge the world into a global recession.[2] Top IMF economists such as Gita Gopinath and Kristalina Georgieva stated that the COVID-19 pandemic would trigger a global recession.

In financial markets, global stock markets erased about US$6 trillion in wealth in one week from 24th to 28th of February. The S&P 500 index also lost over $5 trillion in value in the same week in the US while the S&P 500's largest 10 companies experienced a combined loss of over $1.4 trillion[3] due to fear and uncertainty among investors about how the pandemic would affect firms' profit (Ozili and Arun, 2020). The travel restriction imposed on the movement of people in many countries led to massive losses for businesses in the events industry, aviation industry, entertainment industry, hospitality industry and the sports industry. The combined loss globally was estimated to be over $4 trillion. Several governments in developed countries, such as the U.S. and U.K., responded by offering fiscal stimulus packages including social welfare payments to citizens while the monetary authorities offered loan relief to help businesses during the pandemic. There were also spillovers to poor and developing countries. The effect was more severe on developing countries that have a weak public health infrastructure and non-existing social welfare programs.

[1] For a detailed analysis on the impacts of COVID-19 on the global economy, please read - https://www.researchgate.net/publication/340236487_Spillover_of_COVID-19_impact_on_the_Global_Economy

[2] Financial Times: Global recession already here, say top economists. https://www.ft.com/content/be732afe-6526-11ea-a6cd-df28cc3c6a68

[3] https://www.reuters.com/article/us-health-coronavirus-stocks-carnage/coronavirus-then-oil-collapse-erase-5-trillion-from-u-s-stocks-idUSKBN20W2TJ

4. COVID-19: The Nigerian experience

4.1. The spread of COVID-19

The coronavirus entered Nigeria through an infected Italian citizen who came in contact with a Nigerian citizen who was subsequently infected with the coronavirus. Table 2 shows that the coronavirus infected people in Lagos and then spread to other parts of the country from March to May.

(insert table 2 here)

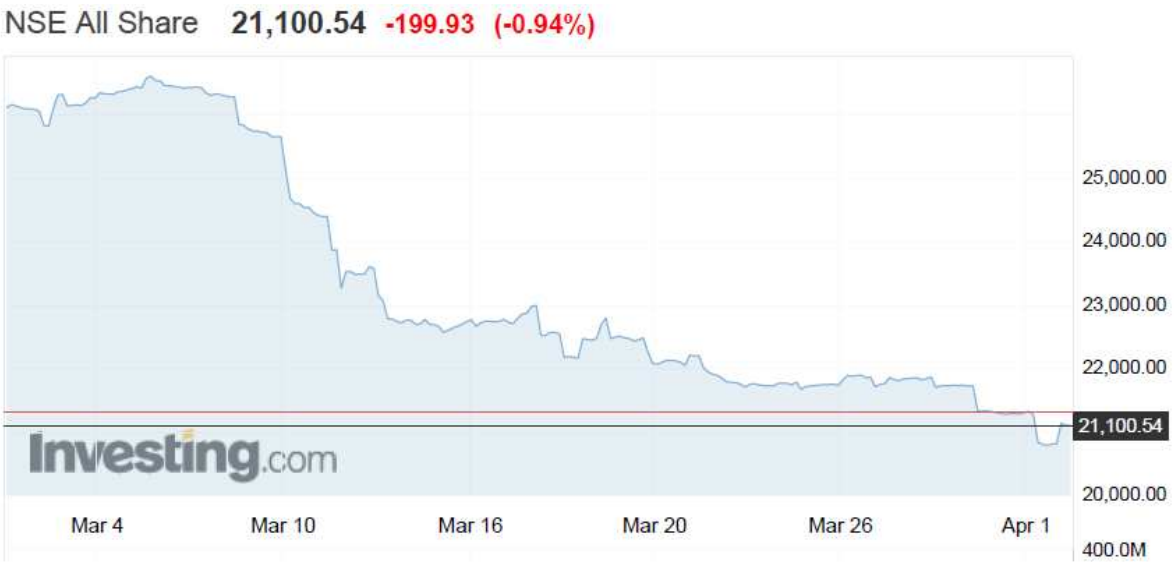
4.2. COVID-19 spillover to the Nigerian economy

4.2.1. Direct effect

There are five main ways through which the COVID-19 pandemic spilled over into Nigeria. One, the COVID-19 pandemic affected borrowers' capacity to service their loans, which gave rise to non-performing loans (NPLs) that depressed banks' earnings and eventually impaired banks' soundness and stability. Subsequently, banks were reluctant to give additional loans to borrowers as more and more borrowers struggled to repay the loans granted to them during the COVID-19 outbreak. Two, there were oil demand shocks which was reflected in the sharp decline in oil price. The most visible and immediate spillover was the drop in the price of crude oil, which dropped from nearly US$60 per barrel to as low as US$30 per barrel in March. During the pandemic, people were no longer travelling and this led to a sustained fall in the demand for aviation fuel and automobile fuel which affected Nigeria's net oil revenue, and eventually affected Nigeria's foreign reserve. Three, there were supply shocks in the global supply chain as many importers shut down their factories and closed their borders particularly China. Nigeria was severely affected because Nigeria is an import-dependent country, and as a result, Nigeria witnessed shortage of crucial supplies like pharmaceutical supplies, spare parts, and finished goods from China. Four, the national budget was also affected. The budget was initially planned with an oil price of US$57 per barrel. The fall in oil price to US$30 per barrel during the pandemic meant that the budget became obsolete and a new budget had to be formed which had to be repriced with at low oil price.

Finally, the COVID-19 pandemic affected the Nigerian stock market. Major market indices in the stock market plunged when investors pulled out their investments into so-called safe havens like US Treasury bonds. Stock market investors lost over NGN2.3 trillion (US$5.9bn) barely three weeks after the first case of coronavirus was confirmed and announced in Nigeria on January 28, 2020. The market capitalisation of listed equities, which was valued at NGN13.657 trillion (US$35.2bn) on Friday, February 28, 2020 depreciated by NGN2.349 trillion to NGN11.308 trillion (US$29.1bn) on Monday 23 March 2020. The All-share index closed at 21,700.98 from 26,216.46 representing 4,515.48 points or 20.8 per cent drop.[4] The stock market crash is illustrated in figure 1 below while table 3 shows the one-month movement in the all share index.

Figure 1: All-Share Index – Nigerian Stock Exchange



(source: investing.com)

(insert table 3 here)

[4] https://guardian.ng/business-services/investors-lose-n2-3tr-in-three-weeks-of-first-covid-19-case-in-nigeria/

4.3. Mitigating the spread of the pandemic

4.3.1. Movement restriction

Both the State and Federal governments imposed movement restrictions in some areas across the country to control the spread of the novel coronavirus, as shown in table 4.

(insert table 4 here)

4.3.2. Using monetary and fiscal policy measures

In response to the COVID-19 outbreak, the monetary authority, the Central bank, said it would provide support to affected households, businesses, regulated financial institutions and other stakeholders to reduce the adverse economic impact of the COVID-19 outbreak. The central bank provided support in six ways. One, it granted extension of loan moratorium on principal repayments from March 1, 2020. This meant that any intervention loan currently under moratorium would be extended by one year. Two, it offered interest rate reduction on all intervention loan facilities from 9% to 5% beginning from March 1, 2020. Three, it offered a NGN50bn (US$131.6m) targeted credit facility to hotels, airline service providers, health care merchants, among others. Four, it provided credit support to the healthcare industry to meet the increasing demand for healthcare services during the outbreak. The loan was available only to pharmaceutical companies and hospitals. Five, it provided regulatory forbearance to banks which allowed banks to temporarily restructure the tenor of existing loan within a specific time period particularly loans to the oil and gas, agricultural and manufacturing sectors. Six, it strengthened the loan to deposit ratio (LDR) policy which allowed banks to extend more credit to the economy. On the other hand, the fiscal authorities had to review and revise the 2020 national budget of N10.59 trillion (US$28 billion). The government announced that the budget was reduced by NGN1.5 trillion ($4.90 billion) as part of the measures to respond to the impact of coronavirus on the economy and in response to the oil price crash. The new budget was benchmarked at US$30 per barrel from US$57 per barrel in the previous budget.

5. Structural factors that worsen the economic crisis

In this section of the paper, I present a description of key structural factors that helped to trigger or worsen the current economic crisis.

5.1. Poor public health infrastructure

According to a 2015 BMI report[5], Nigeria had an estimated 3,534 hospitals in 2014, of which 950 were in the public sector. There were around 9,000 private health facilities, and an estimated 134,000 hospital beds in 2014, equal to 0.8 per thousand populations which is below the rate for the African region. The public health sector in Nigeria has poor infrastructure such as poor emergency services, few ambulance services, ineffective national health insurance systems, insufficient primary health care facilities, and these problems in the public health sector have often been linked to the high maternal and infant mortality rates in the country (Muhammad et al, 2017).

Currently, Nigeria operates a two-tiered healthcare system with a large public healthcare sector and a smaller private healthcare sector. Compared to developed countries, the private healthcare sector in Nigeria is very small and fragmented because of the limited funding for private health insurance. Also, the majority of Nigeria's healthcare spending is still dominated by out-of-pocket expenditure which account for 70% of total health expenditure[6], which suggest that most Nigerians either do not rely or trust the health insurance system in the country or they are unaware of the availability of health insurance. Despite the introduction of the National Health Insurance Scheme (NHIS) in 2004, the population covered by health insurance in 2019 was only 5 percent of the total population.

The Nigerian pharmaceutical industry also has its own problems. The Nigerian pharmaceutical industry is one of the largest in West Africa, and accounts for about 60% of the market share in West Africa. But most of the active pharmaceutical ingredients (API) used in Nigeria are imported from China, and only 10% of the drugs used in Nigeria are manufactured locally in the country. The industry is facing many problems such as poor infrastructural and unreliable utilities, scarcity of skilled workers, poor access to finance, lack of appropriate government incentives, policy

[5] https://2016.export.gov/industry/health/healthcareresourceguide/eg_main_092285.asp#:~:text=These%20include%2054%20federal%20tertiary,Ministry%20of%20Health%20(FMOH).

[6] Aregbeshola (2016), Aregbeshola and Khan (2018a&b)

incoherence by the government, poor demand due to robust competition from Asian companies particularly China, high cost of doing business as a result of imported and expensive production inputs, regulatory problems, among others.

Nigeria has a drug market that is almost unregulated because the health agencies have difficulty in preventing the importation of illegal drugs and difficulty in tracking informal drug sellers that operate without a registered license (Fatokun, 2016). It is estimated that informal drug sellers in the country account for more than 70% of the pharmaceutical market, and these informal agents import substandard and falsified drugs through informal channels. Research shows that 78% of low-quality medications came from private facilities compared to public facilities[7], and most of these private facilities are unregulated. The unregulated drug market in Nigeria is the major factor responsible for the circulation of low-quality medicines in the country (Klantschnig and Huang, 2019).

The failings in Nigeria's public health sector made it difficult for Nigeria to cope with the fast-spreading COVID-19 disease during the outbreak. Local drug manufacturers could not manufacture drugs that could temporarily suppress coronavirus in infected patients because the APIs used to manufacture suppressant drugs could no longer be imported because China had shut down its factories and closed its borders to control the coronavirus pandemic that was ravaging China at the time. Also, there were insufficient isolation centers in many states including in Abuja and Lagos. The number of infected patients in Lagos grew worse to the extent that a stadium had to be converted to an isolation center.[8] In the end, the COVID-19 outbreak overwhelmed the poor public health infrastructure in Nigeria.

5.2. A weak and underdeveloped digital economy

Before the COVID-19 outbreak began, Nigeria already had a weak and underdeveloped digital economy. Currently, Nigeria has eight (8) operational telecom service providers, namely, MTN Nigeria, Globacom, Airtel, 9Mobile, M-Tel, Telkom, Econet Wireless and Vodacom. According to the Nigerian Communications Commission (NCC), the number of mobile phone subscribers in Nigeria decreased by 49,060 in April to 173.38 million from 173.43 million in March. Also, MTN,

[7] Onwujekwe et al (2009)

[8] https://businessday.ng/coronavirus/article/lagos-island-coronavirus-isolation-centre-now-ready-for-use-sanwo-olu/

the largest telecom provider, had 64.73 million users in April which is a drop of 302,448 from 65.03 million in March.[9] Also, Statistia reports that there are 96 million internet users in Nigeria.[10]

Yet, during the COVID-19 pandemic, there were hardly any university or school that offered a full educational curriculum online from start to finish. Many businesses operated using the traditional 'come-to-the office-to-work' model as opposed to the 'working-from-home' model. The outbreak of the novel coronavirus brought challenges to the business environment in Nigeria. It impacted industries and markets in the short term. The operations of these markets and industries would have been minimally affected if they had a large digital infrastructure. The only services that were offered through the existing digital infrastructure during the COVID-19 outbreak were telecommunication services, digital bank transfers and internet services.

The digital economy would have played a major role in driving recovery from the economic crisis if Nigeria's digital economy was robust and well-developed. For instance, in Nigerian schools, universities and educators can put coursework online so that students quarantined at home don't have to miss out on key aspects of their education while school is closed or when students can't get to school. E-commerce apps that enable online buying and selling can allow buyers and sellers to make purchases and sales while staying in their homes. Also, tele-health apps for health and wellness checks can allow individuals in all affected areas to take extra precautions to monitor their vital signs and learn how to reduce their risk of infection. Also, family members can visually check on their parents, grandparents and siblings without physically visiting them which provides a level of comfort that would be impossible over the phone. Online delivery businesses can use virtual assistants to help ensure that goods purchased from online grocery stores are delivered when customers need them. Businesses that don't want their workers to travel or whose employees are uncomfortable taking trips can stay connected with team members, clients and prospective clients around the world using online video conferencing technologies. All these are possible when there is a robust and well-functioning digital economy.

Outside Nigeria, digital technology helped many businesses in developed countries survive the effect of the COVID-19 outbreak, and it created an opportunity to enhance the country's digital

[9] https://www.telecompaper.com/news/nigerian-mobile-phone-subscriber-base-falls-by-49060-in-april--1301940#:~:text=The%20number%20of%20mobile%20phone,from%2065.03%20million%20in%20March.
[10] https://www.statista.com/statistics/183849/internet-users-nigeria/

economy. In the future, a well-developed digital economy in Nigeria, achieved through intense digital technology penetration, will play a greater role in reducing the effect of recessions in the country, and will also help in supporting economic activities, social activities and the development of good health care systems.

5.3. Lack of social welfare program

Before the COVID-19 outbreak, there were major social welfare problems in Nigeria which include child abandonment, armed robbery, homelessness, mental health problems, divorce, and problems of single parenting. These social welfare problems can only be addressed with serious social welfare policy and programs. But, currently, social welfare activities in Nigeria is under developed, poorly funded and is unavailable to majority of those who need them (Ahmed et al, 2017). For instance, the Nigerian government created the 'N-Power' social welfare program to address poverty among unemployed youth in Nigeria. The purpose of the N-Power program was to provide job training and skills to young (and educated) Nigerians, as well as a monthly stipend of 30,000 Nigerian naira (USD $83.33). The problem with the N-Power was that it isolated uneducated people, needy children, and older adults that need to be empowered as well. This is just one example of how Nigeria's social programs did not provide a social welfare safety net for all citizens in need of social welfare. In fact, Nigeria does not have a national social welfare program that offers assistance to all individuals and families in need of health care assistance, food stamps, unemployment compensation, disaster relief and educational assistance.

The consequence of not having a national social welfare program became evident during the coronavirus outbreak of 2020. During the outbreak, people had little to rely on, many poor citizens did not have welfare relief that could help them cope with the economic hardship at the time. There were no housing subsidies, no energy and utilities subsidies to individuals that were most affected by the coronavirus outbreak. In the literature, there are debates on the benefit of using social welfare programs to alleviate poverty and to help citizens cope with disasters (Luenberger, 1996; Dolgoff et al, 1980; Abramovitz, 2001), and social welfare theories provide different perspectives on how social welfare can be designed to meet the basic needs of the people (Fleurbaey and Maniquet, 2011; Arrow et al, 2010; Andersen, 2012). So far, the provision of social welfare services to vulnerable citizens in the population is the most proven way to protect them from economic hardship in bad times (Ewalt and Jennings Jr, 2014). In Nigeria, the lack of such welfare

services for vulnerable people, households and poor individuals during the coronavirus outbreak caused severe pain and economic hardship to households and poor individuals. The implication of this is that social welfare has not been a policy priority by policy makers in Nigeria.

6. Research Design

6.1. Data

Economic and structural data were collected from multiple sources, namely: the Central bank of Nigeria, World Bank, Oxford, etc. Data on purchasing managers index (PMI) and inflation was collected from the Central bank of Nigeria. The sample period was from January 2020 to June 2020. For some data, comparison was made between the current year and the previous year, while for other data, comparison was made on a month-on-month basis. Due to the very small number of observations and the narrow lockdown days during the COVID-19 pandemic, it was almost impossible to perform any robust econometric modelling; therefore, descriptive analysis was used to analyse the economic crisis and its structural causes.

Table 5: Data summary

S/N	Data Name	Data type	Duration	Source
1	Purchasing Managers Index[11]	Economic	Monthly	CBN database https://www.cbn.gov.ng/
2	Inflation	Economic	Monthly	CBN database https://www.cbn.gov.ng/
3	Crude oil (bonny light)	Economic	Monthly	CBN database https://www.cbn.gov.ng/
4	Health care infrastructure	Structural	Year	World Bank database
5	Digital economy	Structural	Year	World Bank database
6	Social welfare infrastructure	Structural	Year	World Bank database

[11] https://www.theglobaleconomy.com/Nigeria/pmi_manufacturing/

6.2. Methodology

Descriptive analysis was used to analyse the effect of COVID-19 pandemic on the economic crisis and its structural causes. Descriptive analysis is a basic statistical tool which is widely used to analyse and interpret primary and/or secondary data.

7. Results

7.1. Analysis of the economic factors

7.1.1. Purchasing Managers Index

The Purchasing Managers Index (PMI) is a measure of the prevailing economic trends in manufacturing in a country. The PMI is derived from a monthly survey of supply chain managers across 19 industries engaged in upstream and downstream activities.

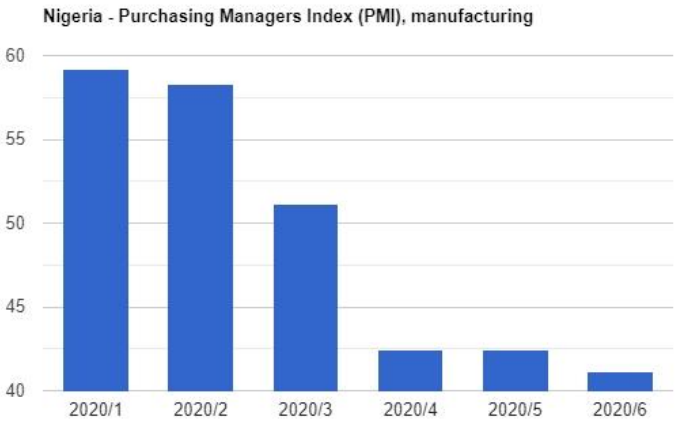
The analysis of Nigeria's PMI data in the early months of 2020 is shown in Table 6. It shows that the month-on-month PMI fell from January to June in 2020 as shown in figure 2. This was because the lockdown restriction prevented workers from working, lenders were unwillingly to issue new loans, and consumers were not buying products at the time which affected the real sector, especially the manufacturing sector. Also, the percentage change in the PMI fell from March to June, which indicates falling productivity in the manufacturing sector.

Table 6: Nigeria – Purchasing Managers Index (PMI), manufacturing

Month/Year	2019	2020	Percentage change	Remark
January	58.5	59.2	1.2	Marginal increase
February	57.1	58.3	2.1	Marginal increase
March	57.4	51.1	-10.9	Decrease
April	57.7	42.4	-26.5	Decrease
May	57.8	42.4	-26.6	Decrease
June	57.4	41.1	-28.4	Decrease

Source: Central Bank of Nigeria

Figure 2



Source: TheGlobalEconomy.com, Central Bank of Nigeria

7.1.2. Inflation

The analysis of Nigeria's inflation data in the early months of 2020 is shown in Table 7 below. It shows that the month-on-month inflation rate increased from January to June in 2020. This was because the lockdown restriction led to increase in the price of consumer goods as trade borders were closed and inter-state travels where banned which disrupted the distribution of consumer goods across the country. Also, the percentage change in inflation rate increased from January to March, and from April to June, which indicates a worsening economic situation.

Table 7: Analysis of inflation (Year on Change) from January to June of 2019 and 2020

	(1)	(2)	(3)	(4)
Month/Year	2019	2020	Difference [(2)-(1)]	% change
January	11.37	12.13	0.76	6.7
February	11.31	12.2	0.89	7.9
March	11.25	12.26	1.01	8.9
April	11.37	12.34	0.97	8.5
May	11.4	12.4	1.0	8.8
June	11.22	12.56	1.34	11.94

7.1.3. Crude oil (bonny light)

The price of crude oil is the single most powerful indicator of the size of Nigeria's revenue because a large portion of Nigeria's revenue derives from crude oil export. As shown in Table 8 below, in columns 4 & 5, the price of crude oil fell significantly at the peak of the COVID-19 pandemic in Nigeria in March, April and May, which led to an economic crisis. Subsequently, the price of crude oil export began to increase slightly in June as the Nigerian government began to ease the lockdown restrictions. The decline in the price of crude oil export from March to April worsened the country's budget deficit and forced Nigerian government to seek foreign loans to avert the existing economic crisis.

Table 8: Analysis of the Price of Crude Oil Export from January to June of 2019 and 2020

	(1)	(2)	(3)	(4)	(5)
Month/Year		2019	2020	Difference (3)-(2)	% change
January	30-January	62.69	61.07	-1.62	-2.6
February	28-February	66.23	53.76	-12.47	-18.8
March	31-March	69.02	15.07	-53.95	-78.2
April	30-April	73.72	13.88	-59.84	-81.2
May	29-May	75.76	33.91	-41.85	-55.2
June	30-June	-	42.94	-	-

7.2. Analysis of the structural causes

7.2.1. Health care infrastructure

An analysis of Nigeria's healthcare infrastructure prior to the COVID-19 pandemic is reported in Table 9. It shows that the number of hospital beds per 1,000 people increased from 1960 to 1988, and decreased from 1990 to 2004. This implies that the healthcare facilities such as hospital beds, are insufficient relative to the growing population in Nigeria.

Table 9: Number of hospital beds per 1,000 people in Nigeria

Country	Indicator Name	1960	1970	1975	1980	1988	1990	2000	2004
Nigeria	Hospital beds (per 1,000 people)	0.42	0.56	0.56	0.87	6.37	1.67	1.2	0.5

7.2.2. Digital economy

An analysis of Nigeria's digital economy data prior to the COVID-19 pandemic is reported in Table 10. It shows that the proportion of individuals using the internet, using mobile phones to pay

bills and to send money in Nigeria is increasing while the fixed broadband subscriptions per 100 people has decreased. This result suggests that, although a lot people are willing and able to use digital services in the country, the number of people who have access a fixed broadband subscription is declining possibly due to high cost of broadband subscription. The implication is that, although Nigeria has some digital economy infrastructure, the declining fixed broadband subscriptions per 100 people became a challenge for Nigeria which worsened the ability of citizens to fully move their businesses to a digital platform during the 2020 COVID-19 pandemic.

Table 10: Analysis of Nigeria's digital economy indicators					
Some digital economy indicators	(1)	(2)	(3)	(4)	(5)
Mobile phone used to pay bills (% age 15+)	2010	2014	2017	% change	% change
Mobile phone used to send money (% age 15+)	-	1.824	5.18	-	184.6
Mobile phone used to pay bills (% age 15+)		0.467	1.29	-	100.7
Fixed broadband subscriptions (per 100 people)	0.063	0.089	0.06	-41.3	-34.7
Individuals using the Internet (% of population)	11.5	21	42	82.6	100

7.2.3. Social welfare infrastructure

An analysis of Nigeria's social welfare infrastructure prior to the COVID-19 pandemic is reported in Table 11. It shows that the adequacy of social insurance programs, as a percentage of total welfare of beneficiary households in Nigeria, increased from 2012 to 2015. Similarly, the adequacy of social protection and labor programs, as a percentage of total welfare of beneficiary households in Nigeria, increased in 2012 and 2015 respectively, while the adequacy of social protection and labor programs, as a percentage of total welfare of beneficiary households in Nigeria, decreased in 2012. The implication is that Nigeria had a social safety net prior to the COVID-19 pandemic, but in reality, these safety nets were either non-existent, dysfunctional or existing but not implemented during the 2020 COVID-19 pandemic.

Table 11: Social welfare infrastructure in Nigeria				
Country	Social Welfare Indicator	2010	2012	2015
Nigeria	Adequacy of social insurance programs (% of total welfare of beneficiary households)	-	9.79	29.28
Nigeria	Adequacy of social protection and labor programs (% of total welfare of beneficiary households)	2.65	7.57	18.34
Nigeria	Adequacy of social safety net programs (% of total welfare of beneficiary households)	2.65	0.63	2.18

8. Conclusion

This paper analyzed the recent economic crisis in Nigeria. It showed that the spillover of COVID-19 pandemic into Nigeria coupled with declining oil price, which were external shocks, caused to the economic crisis in Nigeria in 2020. The structural problems in Nigeria at the time prolonged the economic crisis.

The implication of the study is that policy makers should pay attention to three areas of the economy for economic and structural reform. One, policy makers should introduce economic reforms to diversify the economy and reduce Nigeria's dependence on revenue from crude oil export. Two, policymakers in Nigeria should invest in health care infrastructure to improve the ability of the national health system to withstand the outbreak of contagious diseases. Three, there is also a need to build appropriate digital infrastructure to facilitate the transition from 'face-to-face' business activities to a 'digital or online' business activities, which can help to grow the digital economy. Also, policy makers should use legislation to create a robust social welfare safety net for all citizens particularly for unemployed citizens and poor households. Finally, the government need to focus on rebuilding institutions, and pay more attention to institutions like National Agency for Food and Drug Administration and Control (NAFDAC), and the Nigeria Centre for Disease Control (NCDC).

The scope and severity of the economic crisis in Nigeria, caused by the fall in oil price and the COVID-19 pandemic, is a clear signal that growth and development reforms are needed in Nigeria. In retrospect, the Nigerian government was wise to use fiscal and monetary stimulus package as a partial solution to revive the falling aggregate demand during the pandemic. It used public money to slow the spread of coronavirus.

We do not fully know how bad the increasing spread of COVID-19 will become in Nigeria in the coming months if not years. But what we do know is that this crisis creates an opportunity to reconstruct Nigeria's economy. The economy shutting down and the overloaded public healthcare systems shows that the entire public healthcare system and the economic system needs to be reinvigorated. We should not waste this opportunity to rebuild the country's infrastructure. But if we do not get our house in order then we will be severely punished in the months and years ahead when the next crisis comes. At the national level, the President needs to implement a reconstruction

and development program for the country. At the individual level, citizens should not waste this crisis. This is a time for us to enrich our physical, spiritual, and emotional health, and not just focusing on avoiding the coronavirus. Create a new normal daily routine by eating well, exercise, and get sufficient rest. Enrich our mind by reading some great books, learning a new skill, visualize and document your long-term goals and plan to pursue those goals with passion when the Covid-19 pandemic is over.

This study has two limitations. The first limitation relates to the sample period. The sample period of analysis is small. A longer sample period is desired because it can yield a much richer research insight. Secondly, the currency of the data is another issue. It is possible that the currency of the data may be overtaken by future events as the coronavirus continues to spread rapidly on a daily basis in Nigeria.

Future research can examine the direct impact of the coronavirus pandemic on the performance of financial institutions in Nigeria. Future studies can also examine the impact of the coronavirus pandemic on the level of financial development and inclusion in Nigeria. Future studies can also examine the impact of the coronavirus pandemic on other macroeconomic indicators in Nigeria. More so, future research should carry out a more robust analysis that could also be adopted by other countries with similar characteristics

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Appendix

Table 1a: Covid-19 statistics (as at 15th May 2020)			
Countries	Confirmed cases (Total)	Confirmed deaths (Total)	Recovery cases (Total)
Global	4,626,487	308,610	1,757,282
US	1,484,285	88,507	326.242
Spain	274,367	27,459	188,967
Russia	262,843	2,418	58,226
Egypt	11,228	592	2,799
South Africa	13,524	247	6,083
Nigeria	**5450**	**171**	**1,320**
Source: Worldometer.[12] Note that there may be unconfirmed cases which were never reported to the public health authorities.			

Table 1b: WHO Covid-19 statistics (as at 15th May 2020)			
Countries	Confirmed cases (Total)	Confirmed deaths (Total)	Transmission classification
Nigeria	**5162**	**167**	**Community transmission**
Source: WHO situation report No. 116. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports			

Table 2: Confirmed Covid-19 cases in Nigeria		
Timeline	Confirmed cases	Affected states
17/03/2020	3	Lagos
21/03/2020	22	Lagos, Abuja and Ogun
30/03/2020	131	Lagos, Abuja, Bauchi, Enugu
15/03/2020	5445	All states in Nigeria
Source: Nigeria Centre for Disease Control (NCDC)		

[12] https://www.worldometers.info/coronavirus/#countries

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Table 3: NSE All Share Historical Data (02/03/2020 - 02/04/2020)						
Date	Price	Open	High	Low	Vol.	Change %
Apr 01, 2020	21,100.54	21,309.50	21,317.98	20,779.13	154.35M	**-0.94%**
Mar 31, 2020	21,300.47	21,330.79	21,340.64	21,270.26	422.00M	**-0.14%**
Mar 30, 2020	21,330.79	21,828.65	21,828.65	21,330.79	466.87M	**-2.43%**
Mar 27, 2020	21,861.78	21,842.18	21,885.05	21,803.89	251.41M	**0.48%**
Mar 26, 2020	21,757.47	21,729.48	21,903.00	21,696.88	172.16M	**0.13%**
Mar 25, 2020	21,729.48	21,743.47	21,814.74	21,663.32	233.07M	**-0.05%**
Mar 24, 2020	21,741.16	21,703.80	21,770.42	21,703.80	330.10M	**0.19%**
Mar 23, 2020	21,700.98	22,198.43	22,208.81	21,694.16	464.36M	**-2.24%**
Mar 20, 2020	22,198.43	22,072.56	22,211.67	22,035.11	379.48M	**0.36%**
Mar 19, 2020	22,118.90	22,785.19	22,785.19	22,118.90	525.85M	**-2.94%**
Mar 18, 2020	22,789.64	22,549.09	22,804.70	22,118.37	671.52M	**1.09%**
Mar 17, 2020	22,543.07	22,705.19	23,008.59	22,497.73	675.82M	**-0.71%**
Mar 16, 2020	22,705.19	22,745.39	22,797.39	22,618.36	551.48M	**-0.13%**
Mar 13, 2020	22,734.07	22,729.01	22,813.47	22,550.08	732.62M	**0.17%**
Mar 12, 2020	22,695.88	23,500.46	23,500.46	22,694.32	1.06B	**-3.72%**
Mar 11, 2020	23,572.75	24,278.53	24,321.51	23,260.07	1.39B	**-3.35%**
Mar 10, 2020	24,388.66	25,412.57	25,412.57	24,381.88	594.47M	**-4.91%**
Mar 09, 2020	25,647.54	26,141.24	26,141.24	25,648.45	185.49M	**-2.41%**
Mar 06, 2020	26,279.61	26,426.20	26,455.26	26,273.58	361.08M	**-0.55%**
Mar 05, 2020	26,426.20	26,418.82	26,626.07	26,408.25	431.90M	**0.04%**
Mar 04, 2020	26,415.54	26,283.35	26,438.78	26,256.24	307.66M	**0.61%**
Mar 03, 2020	26,255.11	25,816.57	26,344.55	25,816.57	387.42M	**1.70%**
Mar 02, 2020	25,816.57	26,143.02	26,170.58	25,816.57	325.26M	**-1.53%**
Highest: 26,626.07	Lowest: 20,779.13	Difference: 5,846.94	Average: 23,265.64	Change %: -19.51		
Source: investing.com The figures in green colour represent ASI gains while the figures in red colour represent ASI losses						

Table 4: Movement restriction in Nigeria during Covid-19 pandemic		
	Affected sector	Impact
1	Aviation sector	Massive flight cancellations, NCAA suspends all international airports
2	Education sector	Students were sent back home. Private and public schools and universities were closed
3	Banking sector	Senior staff work from home. Few branch staff available to attend to depositors
4	Civil service sector	Suspension from work for 14 days for remote quarantine
5	Markets	Major food markets were partially closed
6	Religious sectors	All religious services were banned during the pandemic. A Christian pastor was arrested for holding church service during the ban[13]
7	Sports	All sporting events were cancelled
8	All sectors	A 14-days nationwide stay-at-home lockdown was officially enforced beginning from 30th March, 2020.
9	Eleven (11) businesses excluded from the ban[14]	(i) private security companies, (ii) medical establishments, (iii) broadcasters, (iv) food processing and distribution companies, (v) petroleum distribution and retail entities, (vi) power generation, transmission and distribution companies, (vii) hospitals, (viii) telecommunications workers, (ix) health care manufacturing and distribution companies, (x) print media staff, (xi) electronic media personnel.

[13] https://www.pulse.ng/news/metro/coronavirus-watch-how-fcta-arrested-abuja-pastor-for-holding-sunday-service/tw1058m

[14] https://www.vanguardngr.com/2020/03/11-establishments-exempted-from-total-lockdown-in-lagos-abuja-ogun/